

REMARKS

Claims 3-5 and 8-15 are all the claims pending in the application. By this Amendment, Applicant amends claim 13. In addition, Applicant adds new claims 14-15 in order to provide more varied protection for the invention. Claims 14-5 are patentable over the prior art cited by the Examiner at least by virtue of their dependency on claim 11.

Applicant thanks the Examiner for allowing claims 3-5 and 8-10. However, claims 11-13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by a newly found reference, U.S. Patent No. 4,956,864 to Brockman (hereinafter "Brockman"). Applicant respectfully traverses this rejection and respectfully requests the Examiner to reconsider in view of the following comments.

First, Applicant respectfully addresses this rejection with respect to claim 11. Among a number of unique features not taught by the prior art reference cited by the Examiner, independent claim 11 recites: the combiner combines the signal shifted in frequency as a combining signal and the receiver converts the combined signal to make an intermediate frequency signal. The Examiner asserts that Brockman's Fig. 3 teaches the receiving portion as set forth in claim 11 (see page 2 of the Office Action). Applicant respectfully disagrees.

Brockman, similar to the prior art discussed in the background of the invention, teaches having antennas with amplifiers receiving a signal and each being connected by coaxial line 16 to the summing receiver at a location that could be hundreds of feet away (Fig. 1; col. 6, lines 66 to 69). That is, Brockman, just like in the conventional art, teaches having a plurality of antennas, where the receiver receives one, non-combined signal from the antenna (Fig. 2; col. 7,

lines 14 to 21). In Brockman, in the antenna area, each of the received signals is inputted to a mixer 24 and then to an IF amplifier 26, to furnish the first intermediate frequency outputs from the antenna area for each receiver channel. Then, each of these signals are applied to the second mixer 27 in the receiver package located remotely from the antenna area (Figs. 2 and 4; col. 7, lines 22 to 31). In other words, Brockman teaches converting the signal to an intermediate frequency before it is summed up. Brockman teaches a plurality of antenna units, each having means for converting one received signal into IF. In Brockman, the signals are combined for processing and encryption, after they are received and converted to IF. In short, Brockman fails to teach or suggest first combining the signals and then, converting them to IF. In Brockman, just like in the prior art discussed in the background of the invention, the receiving area receives each signal individually. In short, Brockman fails to teach or suggest having a receiver, which receives a combined signal, thereby reducing the size and cost of the base station (receiving device). Moreover, in Brockman, the signal is converted to an intermediate frequency before it is input into the receiver, where it is summed up.

Therefore, the combiner combines the signal shifted in frequency as a combining signal and the receiver converts the combined signal to make an intermediate frequency signal, as set forth in claim 11, is not taught by Brockman, which lacks combining the signal before it is converted to an intermediate frequency. For at least these exemplary reasons, therefore, Applicant respectfully submits that independent claim 11 is patentable over the Brockman. Applicant respectfully requests the Examiner to reconsider and withdraw this rejection.

Next, Applicant respectfully traverses this rejection with respect to claim 12. Claim 12 recites a unique combination of features including “the signal processor demodulates the signal shifted in frequency using a spreading code that is compensated for the frequency shift component corresponding to each of the antennas and which makes a demodulation signal corresponding to each of the antennas.” The Examiner alleges that Fig. 3 of Brockman teaches the signal processor as set forth in the independent claim 12 (page 2 of the Office Action).

Brockman, however, only teaches a demodulator signal spectrum summing which occurs after the third mixer (see Figs. 2 and 3), emanating from the second IF distribution amplifier and IF filter, followed by a third IF amplifier and phase detector, the output of which is the demodulated signal spectrum. These outputs from the main receiver and the N branch receivers are coherently summed in a signal summer 41. This summing circuit provides a demodulated signal at a carrier margin enhanced over what would be available relative to the signal to noise ratio of a single antenna and receiver system having the same aperture area (col. 9, lines 20 to 34).

In other words, Brockman clearly fails to teach or suggest demodulating the signal shifted in frequency using a spreading code that is compensated for the frequency shift component corresponding to each of the antennas and which makes a demodulation signal corresponding to each of the antennas. For at least this exemplary reason, independent claim 12 is patentable distinguishable from Brockman. Applicant respectfully requests the Examiner to reconsider and to withdraw this rejection of claim 12.

Amendment Under 37 C.F.R. § 1.111
U.S. Application No.: 09/497,513

Attorney Docket No.: Q57824

Claim 13 contains features similar to the feature discussed above with respect to independent claim 11. For at least substantially the same exemplary reasons, therefore, Applicant respectfully submits that claim 13 is patentably distinguishable from Brockman.

New claims 14-15 are patentably at least by virtue of their dependency on the independent claim 11.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

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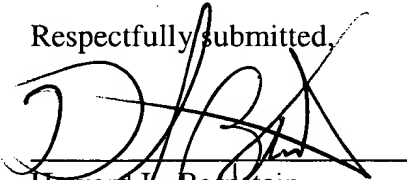
SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER

Respectfully submitted,



Howard L. Bernstein
Registration No. 25,665

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